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The work is illustrated by 291 cuts, which, if not elegant, are mostly sufficiently accurate, and characteristic of the species indicated, to be of value; many of them are original. Two or three new species appear in the work for the first time.

Lucien M. Underwood.

*The Calorific Power of Fuels.* By Herman Poole, F.C.S., etc. New York, J. Wiley & Sons; London, Chapman & Hall. 1898. 8vo. Pp. xv + 255.

The importance of a work on this subject is to-day vastly more evident, and is very much greater than before the days of scientific discussion, investigation and experimental researches in connection with the processes of modern engineering in the department of heat production and utilization. The extensive application of scientific methods by the engineer in his steam engine and boiler trials, and in a thousand other lines of professional work, also makes the subject and such compilation of facts and data peculiarly important. A work specially devoted to this subject thus assumes rare value.

This treatise is based upon M. Scheurer-Kestner's *Pouvoir calorifique des combustibles* and has been worked into a shape which adapts it to our own data and methods and includes later developments both of method and of apparatus. It gives us an excellent general discussion of the calorimetric principles and of the calorimetric apparatus now available for use by the chemist and by the engineer, and, with especial fullness, all of those found helpful in commercial work.

The fuels are described at considerable length and their heating powers given as computed from their composition and checked by direct calorimetric measurement. The report of the committee of the American Society of Mechanical Engineers on exact methods of steam boiler trial is introduced, and a large quantity of data and an excellent bibliography are appended, the latter including numerous and helpful references to the files of scientific journals. The 'Fuel Table,' in which are given the composition and the calorific power of the fuels of the world, is the most extensive yet produced and is extremely interesting and valuable.

The book is well up to date and includes descriptions of the latest calorimeters, as Berthelot's, Mahler's Barrus' and Carpenter's, gives Ringelmann's 'smoke scale,' Kent's revision of 'Johnson's Report on Coals,' and other no less important recent contributions to the literature of the subject.

The book is one which is likely to find its way into the library of all chemists and of all engineers having to do with applications of the calorific power of fuels. It is well written, well published and of moderate cost.

R. H. Thurston.

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*SCIENTIFIC JOURNALS.*

*The Journal of Physical Chemistry.* The January number begins the second volume of this journal. The opening article is the first part of an extensive paper 'On the General Problem of Chemical Statics:' by P. Duhem, Professor of Theoretical Physics at Bordeaux. The paper is "a commentary on and a complement to the celebrated memoir of J. Willard Gibbs, 'On the Equilibrium of Heterogeneous Substances.'" The second article, 'Fractional Crystallization:' by C. A. Soch, is a contribution to the theory of separations by fractional crystallization. 'Distribution of Mercuric Chlorid between Toluene and Water:' by Oliver W. Brown, completes the original matter. Several pages are devoted to book reviews. The department of reviews of the journal literature of physical chemistry is very full and critical.

February. 'Solutions of Silicates of the Alkalies:' by Louis Kahlenberg and Azariah T. Lincoln. From freezing point and conductivity determinations of solutions of the silicates of sodium, potassium, lithium, rubidium and cesium, it is concluded that in such solutions the silicate is hydrolytically decomposed into the caustic alkali and colloidial silicic acid. 'On the General Problem of Chemical Statics:' by F. Duhem. The conclusion of the paper begun in the January number. 'On Integrating Factors:' by P. Saurel. A mathematical introduction to theoretical studies that are to follow. 'Vapor-tension of Concentrated Hydrochloric Acid Solutions:' by F. R. Allan. It is concluded that electrolytic dissociation is not an

adequate explanation of the fact that hydrochloric acid solutions do not obey Henry's law. Book and journal reviews.

March. 'The Equilibria of Stereoisomers:' by WILDER D. BANCROFT. A study of substances having variable melting points. 'Acetaldoxime:' by HECTOR R. CARVETH. A study of its variable melting points. 'Naphthalene and Aqueous Acetone:' by HAMILTON P. CADY. 'Indicators:' by JOHN WADDELL. The effect of organic solvents in discharging the colors of indicators. 'Normal Elements:' by D. MCINTOSH. Book and journal reviews.

Mention should be made of the excellent style and typography of the *Journal*.

THE articles in the current number of *The American Naturalist* commemorate the fiftieth anniversary of the beginning of Agassiz's instruction in Harvard University, marking, as is said in an editorial article, an era in the history of zoology in America. An unsigned article reviews the life of Agassiz, with special reference to his activity as a teacher. Then follow articles on The Philosophical Views of Agassiz, by Professor A. S. Packard; Agassiz and the Ice Age, by Professor G. Frederick Wright; Agassiz on Recent Fishes, by President David Starr Jordan; Agassiz's Work on Fossil Fishes, by Professor Charles R. Eastman; Agassiz's Work on the Embryology of the Turtle, by Mrs. Gertrude C. Davenport, and Agassiz at Penikese, by Professor Burt. G. Wilder.

## SOCIETIES AND ACADEMIES.

### BOSTON SOCIETY OF NATURAL HISTORY.

AT the general meeting, February 2d, sixty-four persons were present.

Mr. William C. Bates showed a series of lantern views illustrating the natural features of Jamaica and the Jamaicans. He gave a brief historical account of the island and spoke of the advantages due to its accessibility and climate and to many of the interesting characteristics judged from a natural history standpoint. Mr. Bates closed with a series of proverbs and riddles showing that the legends and beliefs of the Jamaicans have many similarities to those of other countries.

A general meeting was held February 16th, with twenty-four persons present.

Mr. John Murdoch read a paper on the animals known to the Eskimos of northwestern Alaska. The climate and natural features of the country near Point Barrow were briefly described, and the behavior of the ice noted. In the capture of animals the bow has been superseded by the rifle. The Eskimos depend upon the walrus, the seals and the whales; the ring seal (*Phoca fœtida*) is the most important animal, the reindeer being next in importance. The polar bears are not common and avoid encounters with men and dogs. The wolf is not found in the vicinity of Point Barrow, but is abundant in the reindeer country; they chase the deer in packs. The tail of the wolverine is especially valued for decorative purposes. The Arctic fox is the most abundant animal found at Point Barrow; it is very shy and so well protected that it is seldom seen. The habits of many birds, the various eiders and gulls, the snow bunting, Lapland longspur, snowy owl and ptarmigan were noted. The Eskimos do not pay much attention to birds.

The Society met March 2d, seventy-one persons present.

Mr. Hollis Webster spoke of some common mushrooms, edible and poisonous, describing in detail the principal characteristics of the common mushroom, *Agaricus campestris*, and of the deadliest member of the group, *Amanita phalloides*. Mr. Webster mentioned the popular interest in the group, its value as food, and noted briefly the classification and method of growth of the fungi. He also described, with the aid of a series of lantern slides, many forms of *Boleti*, *Russula*, *Lepiota*, etc.

At the general meeting held March 16th there were one hundred and fifty-two persons present.

Professor William Libbey read a paper on Cuba, which was illustrated by lantern slides. Professor Libbey's account was based upon personal observation and gave a brief sketch of the country, with special reference to the physical features and to the customs and characteristics of the Cubans.

SAMUEL HENSHAW,
*Secretary.*